

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. -8. (canceled)

9. (currently amended) A network system ~~comprising~~ comprising:
a plurality of network domains coupled by line ~~from to~~ one another, another;
each of the network domains including a communication node capable of
transferring an IP packet and process data, a network management system, a
control server, and a plurality of end systems, wherein

in each one of the network domains,

the network management system manages a user-information database
which stores information of users, a policy database and in-domain network
component information;

the control server includes a resource database, a resource reserving means,
a domain border determining means and an inter-organization arbitrating means;

the resource reserving means accepts a request for network resource, based
on a request for setting a QoS-guaranteed communication path, issued within the
each one of the network domains or from another of the network domains through
the domain border determining means, and obtains a network resource

corresponding to the request for network resource within the each one of the network domains based on the user-information database, the policy database and the in-domain network component information from the network management system and network resource information provided in the resource database;

the domain border determining means issues the request for network resource to the inter-organization arbitrating means when the requested network resource is a network resource on the line between the each one of the network domains and the another of the network domains or a network resource belonging to the another of the network domains; and

the inter-organization arbitrating means negotiates with another inter-organization arbitrating means provided in another control server within the another of the network domains to obtain a network resource corresponding to the request for network resource,

wherein if the request for setting a QoS-guaranteed communication path indicates reservation of a network resource between said network domains, said network management system operates to break the network resource request into a set of network resource elements corresponding to the respective communication nodes with reference to a path control table received from said communication node into a set of network resource elements, convert said request into a set of request requests for reserving each network resource element, enter the reserving information of the corresponding network resource element for each converted reserving request, and determine if said network resource element can be reserved

on the basis of the qualification information of a request source having issued said reserving request and network resource allocating information.

10. (previously presented) A network system according to claim 9, wherein when a network resource corresponding to the request for network resource is not obtained within the each one of the network domains based on the user-information database, the resource reserving means obtains a replacement network resource information from the resource database and obtains a network resource corresponding to the request for network resource based on the replacement network resource information.

11. (previously presented) A network system according to claim 9, wherein the request for setting a QoS-guaranteed communication path is a network resource reserving request or a network resource prompt request, and wherein the resource reserving means and the inter-organization arbitrating means of the each one of the network domains reserves or promptly obtains a network resource corresponding to the request for network resource in accordance with the network resource reserving request or the network resource prompt request.

12. (previously presented) A network system according to claim 11, wherein when the request for setting a QoS-guaranteed communication path is the network resource reserving request, the resource reserving means of the each one

of the network domains obtains and releases a reserved network resource corresponding to the request for network resource at a reserved start time and an end time, respectively.

13. (previously presented) A network system according to claim 11, wherein when the request for setting a QoS-guaranteed communication path is the network resource prompt request, the resource reserving means of the each one of the network domains releases the obtained network resource in accordance with a request for releasing the obtained network resource.

14. (previously presented) A network system according to claim 10, wherein the request for setting a QoS-guaranteed communication path is a network resource reserving request or a network resource prompt request, and wherein the resource reserving means and the inter-organization arbitrating means of the each one of the network domains reserves or promptly obtains a network resource corresponding to the request for network resource in accordance with the network resource reserving request or the network resource prompt request.

15. (previously presented) A network system according to claim 14, wherein when the request for setting a QoS-guaranteed communication path is the network resource reserving request, the resource reserving means of the each one of the network domains obtains and releases a reserved network resource

corresponding to the request for network resource at a reserved start time and an end time, respectively.

16. (previously presented) A network system according to claim 14, wherein:
when the request for setting a QoS-guaranteed communication path is the network resource prompt request, the resource reserving means of the each one of the network domains releases the obtained network resource in accordance with a request for releasing the obtained network resource.

17. (previously presented) A network system according to claim 9, wherein the control network is separated from a network configured by a mutual connection of communication nodes due to the communication path between said network domains.

18. (new) A network system comprising a plurality of network domains coupled by a line to one another, each one of the network domains including:
a communication node capable of transferring an IP packet and processing data;
a control server;
an end system; and
a plurality of end systems, wherein

in each of the network domains, the control server exchanges, based on a setting request of the QoS-guaranteed communication path issued from the end system within another of the network domains, a list of border resources among the network domains with the control server within the another of the network domains to negotiate for setting a communication path, and sets a QoS-guaranteed communication path among the network domains.

19. (new) A network system according to claim 18, wherein in the negotiation for setting a communication path, the control server exchanges, as the list of border resources, a list of border resources of a QoS-guaranteed communication path among the network domains.

20. (new) A network system according to claim 18, wherein in the negotiation for setting a communication path, the control server exchanges, as the list of border resources, a list of border resources of a QoS-guaranteed communication path with a priority among the network domains, and sets a communication path among the network domains based on the list of border resources of the another of the network domains thus exchanged and the list of border resources of the each one of the network domains.

21. (new) A network system according to claim 18, wherein in the negotiation for setting a communication path, the control server exchanges, as the list of border

resources, a list of border resources with a priority, then determines a priority order of the communication paths among the network domains, and further exchanges a list of border resources of a QoS-guaranteed communication path among the communication paths which priorities are determined in this manner.

22. (new) A network system according to claim 18, wherein the control server sets a communication path within the each one of the network domains after the negotiation for setting a communication path.

23. (new) A network system according to claim 18, wherein the control server sets a communication path based on a user-information database, a policy database and in-domain network component information.

24. (new) A network system according to claim 18, wherein
the control server includes a resource database, a resource reserving means,
a domain border determining means and an inter-organization arbitrating means,
wherein

the resource reserving means accepts a request for network resource, based on a request for setting a QoS-guaranteed communication path, issued within the each one of the network domains or from another of the network domains through the domain border determining means, and obtains a network resource corresponding to the request for network resource within the each one of the network

domains based on the user-information database, the policy database and the in-domain network component information from the network management system and network resource information provided in the resource database, and

the inter-organization arbitrating means negotiates with another inter-organization arbitrating means provided in another control server within the another of the network domains to obtain a network resource corresponding to the request for network resource.

25. (new) A network system according to claim 18, wherein a control network and a network configured by coupling the communication nodes from one another are separately provided.

26. (new) A network system comprising a plurality of network domains coupled by a line to one another, each one of the network domains including:

a communication node capable of transferring an IP packet and processing data;

a control server;

an end system; and

a plurality of end systems, wherein

in each of the network domains, the control server sets, based on a setting request of a QoS-guaranteed communication path issued from the end system within the each one of the network domains to the end system within another of the

network domains, a QoS-guaranteed communication path among the network domains with the control server within the another of the network domains, and sets a communication path within the each one of the network domains based on the setting of the QoS-guaranteed communication path.

27. (new) A network system according to claim 26, wherein in the setting of a communication path, the control server exchanges, as the list of border resources, a list of border resources of a QoS-guaranteed communication path with a priority among the network domains, and sets a communication path among the network domains based on the list of border resources of the another of the network domains thus exchanged and the list of border resources of the each one of the network domains.

28. (new) A network system according to claim 26, wherein a control network and a network configured by coupling the communication nodes from one another are separately provided.